

Pending Claims 1, 4, 5, 7-9, 17, 20 and 22-25

1. A method for the treatment of metanephric tissue for transplantation into a recipient comprising contacting said metanephric tissue, *in vitro*, with a growth factor-containing composition comprising one or more growth factors for metanephric development and transplanting said metanephric tissue into said recipient.
4. The method of claim 1 wherein said metanephric tissue is contacted with said growth factor-containing composition for less than 8 hours.
5. The method of claim 1 wherein said metanephric tissue is contacted with said growth factor-containing composition for less than 2 hours.
7. A method for the treatment of metanephric tissue transplanted into a recipient comprising contacting said transplanted metanephric tissue with a growth factor-containing composition comprising one or more growth factors for metanephric development, wherein said growth factor-containing composition is administered to said transplanted metanephric tissue at the time a ureteroureterostomy is performed.
8. The method of claim 22 wherein said growth factor-containing composition is administered to said metanephric tissue by an osmotic pump.
9. The method of claim 22 wherein said growth factor-containing composition is administered to said recipient in a manner such that said one or more growth factors for metanephric development are present in said recipient's blood that circulates through said metanephric tissue.
17. The method of claim 1 or 7 wherein said growth factor-containing composition comprises vascular endothelial growth factor.

20. The method of claim 1 or 7 wherein said growth factor-containing composition comprises vitamin A.
22. A method for the treatment of metanephric tissue comprising contacting said metanephric tissue, *in vivo*, with a growth factor-containing composition comprising one or more growth factors for metanephric development at the time of or after being transplanted into said recipient.
23. The method of claim 22 wherein said growth factor-containing composition comprises vascular endothelial growth factor.
24. The method of claim 22 wherein said growth factor-containing composition comprises vitamin A.
25. (New) The method of claims 1, 7, or 22 wherein said contacted metanephric tissue develops into a functional chimeric kidney in said recipient and wherein the glomeruli of said functional chimeric kidney are vascularized primarily by said recipient and are able to filter plasma.